

What is claimed is:

1. A advancing/retracting mechanism comprising:

5 a first cam including an angled surface and one of a first shoe and a helical surface having an axis of rotation;

a second cam including an angled surface and one of a second shoe and a surface perpendicular to the axis of rotation; and

10 a barrel including the other of the first shoe and the helical surface and the other of the second shoe and the perpendicular surface, the first shoe abutting the helical surface and the second shoe abutting the perpendicular surface, at least a portion of one of the cams being disposed in the barrel,

15 wherein the angled surfaces of the first and second cams substantially correspond in a first state, and are at least partially opposed in a second state, and the first cam travels a first distance along the longitudinal axis of the barrel from the first to the second state and the second cam travels a second distance that is greater then the first distance from the first to the second state.

2. The advancing/retracting mechanism of claim 1 wherein the first cam includes the first shoe that slidingly engages with the helical surface on the barrel.

20 3. The advancing/retracting mechanism of claim 1 wherein the second cam includes the second shoe that slidingly engages with the perpendicular surface on the barrel.

4. The advancing/retracting mechanism of claim 1 wherein the first and second cams abut along more than a point of contact in the second state.

25 5. The advancing/retracting mechanism of claim 1 wherein at least a portion of the angled surface is perpendicular to a longitudinal axis of the cam.

6. The advancing/retracting mechanism of claim 1 wherein the angled surface is non-planar.

7. An advancing/retracting mechanism comprising:

5 a first cam including a first end and a second end, wherein the first end has a first angled surface and the second end operatively receives input from a user;

a second cam including a first end and a second end, wherein the first end has a second angled surface that engages with the first angled surface, and the second end operatively activates an output device; and

10 a barrel including a helical surface, wherein a portion of one of the first and second cams engages the helical surface from a first to a second position and rotates the cam relative to the other cam.

8. The advancing/retracting mechanism of claim 7 wherein the portion of at least one cam is a shoe.

15 9. The advancing/retracting mechanism of claim 7 wherein the portion of at least one cam slidingly engages with the helical surface of the barrel.

10. The advancing/retracting mechanism of claim 7 wherein the first and second cams abut along more than a point of contact in a second state.

11. The advancing/retracting mechanism of claim 7 wherein the first and second cams abut along a majority of the angled surfaces in a first state.

20 12. The advancing/retracting mechanism of claim 7 wherein the angled surface of at least one cam has a first and a second portion that are parallel to each other and perpendicular to the central axis of one of the cams.

13. A writing utensil comprising:

a first cam including an angled surface and one of a first shoe and a helical surface having an axis of rotation;

5 a second cam including an angled surface and one of a second shoe and a surface parallel to the axis of rotation;

a barrel having a first end and a second end, and including the other of the first shoe and the helical surface and the other of the second shoe and the parallel surface, the first shoe abutting the helical surface and the second shoe abutting the parallel surface, wherein at least one cam is disposed in the barrel;

10 an input device located near the second end of the barrel, the input device being operatively connected to the first cam, wherein the first cam travels a first distance along the longitudinal axis of the barrel from a first to a second state; and

an output device located near the first end of the barrel, the output device being operatively connected to the second cam, wherein the second cam travels a
15 second distance that is greater than the first distance from the first to the second state.

14. The writing utensil of claim 13 wherein the input device is a button.

15. The writing utensil of claim 13 wherein the output device is a writing tip.

16. The writing utensil of claim 13 comprising a body in which the barrel, the input device, and the output device are disposed.
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17. The writing utensil of claim 16 wherein the body and barrel are integral.

18. The writing utensil of claim 13 wherein the first cam includes a shoe having an angled contact surface that slidably engages with the helical surface of the barrel.
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19. The writing utensil of claim 13 wherein the second cam includes a slider that slidingly engages with the parallel surface in the barrel.

20. The writing utensil of claim 13 wherein the first and second cams abut along more than a point of contact in a second state.

5 21. The advancing/retracting mechanism of claim 13 wherein the angled surface is non-planar.